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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 10/676,397  
Inventor(s) : Rehders, et al.  
Filed : October 1, 2003  
Art Unit : 1731  
Examiner : Jose A. Fortuna  
Docket No. : 9047MQ  
Confirmation No. : 7544  
Customer No. : 27752  
Title : STRENGTHENED TISSUE PAPER PRODUCTS  
COMPRISING LOW LEVELS OF XYLAN

APPEAL BRIEF

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

A Notice of Appeal is being submitted together with this brief.

REAL PARTY IN INTEREST

The real party in interest is The Procter & Gamble Company of Cincinnati, Ohio.

RELATED APPEALS AND INTERFERENCES

There are no known related appeals, interferences, or judicial proceedings.

STATUS OF CLAIMS

Claims 1-6 and 9-18 are rejected.

Claims 1-6 and 17-18 are appealed.

A complete copy of the appealed claims is set forth in the Claims Appendix attached herein.

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Appl. No. 10/676,397  
Docket No. 9047MQ  
Appeal Brief dated July 6, 2007  
Customer No. 27752

STATUS OF AMENDMENTS

No amendment was filed.

SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1 recites a tissue paper product made from a papermaking furnish (Specification, p. 3, lines 28-34) comprising one or more plies of a tissue paper (Specification, p. 2, lines 7-9). At least one of the plies comprises cellulose and from about 0.005% to no more than 0.1% by weight, based on the weight of cellulose, of xylan added to the furnish (Specification, p. 6, lines 27-29).

Claim 2 depends from Claim 1 and recites that at least one of the plies comprises from about 0.015% to about 0.1% by weight based on the weight of cellulose of xylan added to the furnish (Specification, p. 6, lines 3-7).

Claim 3 depends from Claim 1 and recites that at least one of the plies comprises from about 0.02% to about 0.05% by weight based on the weight of cellulose of xylan added to the furnish (Specification, p. 6, lines 3-7).

Claim 4 depends from Claim 1 and recites that the source of the xylan is pulp refined to have a Canadian Standard Freeness measurement less than about 350 and a Schopper-Riegler slowness value greater than about 35 °SR (Specification, p. 6, lines 8-18).

Claim 5 depends from Claim 4 and recites that the highly refined pulp has a Canadian Standard Freeness measurement less than about 100 and a Schopper-Riegler slowness value of from about 60°SR to about 80°SR (Specification, p. 6, lines 15-18).

Claim 6 depends from Claim 5 and recites that the pulp is birch pulp (Specification, p. 10, line 5).

Claim 17 depends from Claim 1 and recites that the tissue paper product comprises from about 0.3 kg/ton to about 1 kg/ton charge biasing species (Specification, p. 7, lines 15-18).

Claim 18 depends from Claim 1 and recites that the papermaking furnish further comprises from about 0.1 kg/ton to about 2 kg/ton of a cationic charge biasing species; wherein the cationic charge biasing species is a low molecular weight cationic synthetic

Appl. No. 10/676,397  
Docket No. 9047MQ  
Appeal Brief dated July 6, 2007  
Customer No. 27752

polymer having a molecular weight of no more than about 500,000 (Specification, p. 7, lines 7-10).

Appl. No. 10/676,397  
Docket No. 9047MQ  
Appeal Brief dated July 6, 2007  
Customer No. 27752

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-6 and 17-18

Rejection under 35 U.S.C. §103(a) over U.S. Pat. No. 5,810,972.

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JUL 06 2007

Appl. No. 10/676,397  
Docket No. 9047MQ  
Appeal Brief dated July 6, 2007  
Customer No. 27752

### ARGUMENTS

#### Rejection Under 35 USC §103(a) Over U.S. Pat. No. 5,810,972

##### Claims 1-6 and 17-18

Claims 1-6 and 17-18 have been rejected under 35 U.S.C. §103(a) as being unpatentable over US 5,810,972 (hereinafter "Reinheimer"). The Appellant submits that Reinheimer fails to establish the *prima facie* case of obviousness because Reinheimer fails to teach or suggest all of the claim limitations in Claim 1 (on which remaining claims are dependent). MPEP §§ 2142-2143, *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claim 1 recites that from about 0.005% to **no more than 0.1%** by weight, based on the weight of cellulose, of xylan added to the papermaking furnish. The Examiner states that the disclosed preferred range is from 4%-6% and that the examples given in the specification are in the preferred range (Office Action dated June 22, 2007). The Appellant agrees that this is the range that is preferred in the specification, but the Appellant notes that the **claimed** range is from about 0.005% to no more than 0.1% which is well outside of what is disclosed in Reinheimer.

First, the Appellant notes that this invention is the result of the surprising discovery that relatively low levels of xylan (lower than those of the prior art) provides increased strength when making paper products (Specification, p. 1, lines 32-35). Reinheimer discloses to add xylan in the form of birch pulp, but Reinheimer teaches addition of xylan in an amount that is above the range that is **currently claimed**. Specifically, Reinheimer teaches that a dry weight percentage of 1% to 6% of birch pulp is added to the furnish as a xylan-containing hemicellulose additive. (Reinheimer, Claims 10 and 11). Further, the Appellant submits that because it is known in the art that birch pulp has approximately 25% to 35% xylan (Specification, p. 6, lines 11-12). Thus, taking the minimum and maximum limits:

$$25\% \times 1\% = 0.25\% \text{ (minimum)}$$

$$35\% \times 6\% = 2.1\% \text{ (maximum)}$$

In other words, **one of skill in the art to the conclusion Reinheimer discloses adding approximately 0.25% to 2.1% of xylan via addition of birch pulp which is well above**

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CENTRAL FAX CENTER****JUL 06 2007**

Appl. No. 10/676,397  
Docket No. 9047MQ  
Appeal Brief dated July 6, 2007  
Customer No. 27752

the Appellant's **claimed** range of from about 0.005% to no more than 0.1% as recited in Claim 1.

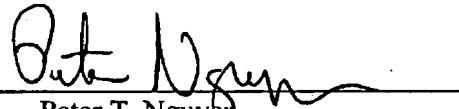
Further, Reinheimer contains to teaching, suggestion, or motivation to one of skill in the art to use a low amount of xylan as is currently claimed by the Appellant as Reinheimer discloses a significantly higher amount of xylan than is claimed, but contains no disclosure as to a lower level of xylan than is disclosed. As a result, the Appellant submits that Reinheimer fails to make the *prima facie* case of obviousness.

SUMMARY

In view of all of the above, it is respectfully submitted that Claims 1-8 and 17-18 are nonobvious under 35 U.S.C. §103(a) in view of the cited prior art.

Respectfully submitted,

THE PROCTER & GAMBLE COMPANY



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July 6, 2007

Customer No. 27752

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JUL 06 2007

Appl. No. 10/676,397  
Docket No. 9047MQ  
Appeal Brief dated July 6, 2007  
Customer No. 27752

#### CLAIMS APPENDIX

1. (Rejected) A tissue paper product made from a papermaking furnish comprising one or more plies of a tissue paper; wherein at least one of the plies comprises cellulose and from about 0.005% to no more than 0.1% by weight, based on the weight of cellulose, of xylan added to the furnish.
2. (Rejected) tissue product according to Claim 1 wherein at least one of the plies comprises from about 0.015% to about 0.1% by weight based on the weight of cellulose of xylan added to the furnish.
3. (Rejected) A tissue product according to Claim 1 wherein at least one of the plies comprises from about 0.02% to about 0.05% by weight based on the weight of cellulose of xylan added to the furnish.
4. (Rejected) A tissue product according to Claim 1 wherein the source of the xylan is pulp refined to have a Canadian Standard Freeness measurement less than about 350 and a Schopper-Riegler slowness value greater than about 35 °SR.
5. (Rejected) A tissue product according to Claim 4 wherein the highly refined pulp has a Canadian Standard Freeness measurement less than about 100 and a Schopper-Riegler slowness value of from about 60°SR to about 80°SR
6. (Rejected) A tissue product according to Claim 5 wherein the pulp is birch pulp.
17. (Rejected) The tissue paper product of Claim 1 wherein the tissue paper product comprises from about 0.3 kg/ton to about 1 kg/ton charge biasing species.
18. (Rejected) The tissue paper product of Claim 1 further comprising from about 0.1 kg/ton to about 2 kg/ton of a cationic charge biasing species; wherein the cationic charge biasing species is a low molecular weight cationic synthetic polymer having a molecular weight of no more than about 500,000.

Appl. No. 10/676,397  
Docket No. 9047MQ  
Appeal Brief dated July 6, 2007  
Customer No. 27752

## EVIDENCE APPENDIX

None



Appl. No. 10/676,397  
Docket No. 9047MQ  
Appeal Brief dated July 6, 2007  
Customer No. 27752

RELATED PROCEEDINGS APPENDIX

None